ATTACHMENT

REAP STATEMENT OF WORK (SOW)

BACKGROUND

The Environmental Protection Agency (EPA; Agency) has been mandated under various laws to identify, assess, regulate, and remediate environmental hazards which may pose a threat to human health or the environment. These requirements necessitate that EPA gather and/or generate information on which to base administrative and regulatory decisions.

OBJECTIVE

The objective of this Statement of Work (SOW) is to define the focus of the ground rules and requirements under this contract which will lead to the gathering and/or generation of environmental data of known quality, which can then be used to support appropriate Agency decisions.

This SOW is designed to support multiple Agency programs each requiring similar tasks. These areas are Analytical Support Services. More details regarding these task areas will be outlined later in the SOW.

GENERAL REQUIREMENTS

The contractor shall be assigned work by Task Orders (TO).

The contractor shall use analytical instruments, methods and techniques, and documented Quality Assurance (QA)/Quality Control (QC) procedures which meet the approval of EPA Region VII and/or the regulatory program being supported. QA/QC procedures may be those specified in EPA Region VII Standard Operating Procedures (SOPs) or other EPA documents. Procedures to be utilized by the contractor will be approved by EPA on a TO-by-TO basis, but, where appropriate, the approved methods may be those chosen by the contractor.

The contractor shall provide technical/scientific and support personnel in such a number and with such specific skills and qualifications as are necessary to satisfactorily perform all contract requirements. The contractor shall be responsible for maintaining sufficient backup capabilities including personnel, equipment, supplies, and parts, to fulfill contract requirements within applicable time restraints. The contractor shall provide all required equipment, materials, and supplies necessary to meet the requirements of a TO, unless otherwise specified by the Agency. All capital equipment, small equipment, and non-expendable supplies purchased under this contract shall be, and shall remain, EPA property.

The contractor may be required to coordinate activities with various EPA programs and contract organizations. These activities may include, but not be limited to, participating in conference calls and/or meetings, and obtaining information/documentation in support of a specific TO. Contractor interaction with these and other Agency groups shall be specified and limited by the EPA Project Officer (PO).

The samples to be handled by the contractor may contain potentially hazardous materials. The contractor should be aware of the potential hazards associated with activities to be conducted under this contract. It is the contractor's responsibility to establish and implement the necessary measures to comply with all local, state, and federal safety and environmental regulations. The responsibility of the contractor includes any cost incurred for the proper disposition of all environmental samples or other waste material received or generated under this contract.

Computer and computerized word-processing systems used by the contractor in performance of this contract shall be compatible with Agency-utilized systems. Computer and word-processing hardware and software shall be IBM or IBM-compatible. A word-processing system shall support Windows and be a WordPerfect Version 9 or compatible. The contractor is responsible for providing all computer software, except for software written by the Agency for the sole purpose of providing electronic data deliverables under this contract. Software provided to the contractor by the Agency shall not be modified, duplicated, or distributed to any parties without the written approval of the EPA Project Officer.

All data generated, under specific TOs, are the property of the Agency and shall not be modified, copied, released, or distributed by the contractor without the written approval of the PO or his designee.

In the event that the contractor fails to adequately defend data generated under this contract, the Agency may institute proceedings against the contractor to recover all government costs associated with the analysis effort and the associated enforcement activity. An "inadequate defense of data" shall mean a decision against the Agency in a formal enforcement action, where such decision is a result of the failure of the contractor to demonstrate the technical validity of data generated under the contract in a legal proceeding.

PROGRAM STRUCTURE/STAFF REQUIREMENTS

An EPA Contract Officer (CO) shall be designated to administer contract activity. An EPA Project Officer (PO) shall be designated to coordinate contract activity, issue technical direction to the contractor, and monitor contract performance. The PO or PO-designated Task Order Project Officer (TOPO) shall be responsible for the administration of the technical aspects of a project, for each TO which is issued under the contract.

Specified contractor personnel shall be designated as key personnel. These key personnel include a Team Manager (TM) and a QA/QC Coordinator. The TM shall be responsible to the EPA PO for the performance of work under this contract and in accordance with EPA technical direction provided by the PO and/or TOPO. The TM shall provide information on the status and progress of activities to the PO as required and submit contract-required reports to the PO.

The TM shall be responsible for maintaining technical and financial integrity in performance of assigned activities in accordance with EPA-approved QAPPs and Standard Operating Procedures (SOP), EPA technical direction, and contract terms and conditions.

Data Quality

The contractor shall assume full responsibility for documenting the quality of the data generated under this contract. The QA/QC Coordinator shall have the overall responsibility for assuring that all work performed under this contract is in accordance with all applicable QA/QC requirements for a given task order.

ANALYTICAL SUPPORT SERVICES

Exhibit A

ANALYTICAL SUPPORT SERVICES

GENERAL REQUIREMENTS

The requirements for Task 1 include the analytical work, ordered under a TO, to be performed in the contractor's facility using contractor's equipment, instrumentation, supplies, and personnel, or government-furnished equipment as specified in the individual TO.

There are no restrictions on the types of sample matrices which may be submitted for analysis. Typical matrices include air, solids (e.g. sediment, dust, wood, insulation, ash, and paving materials), water, waste, gases, wipes, and plant or animal tissue.

The contractor shall provide TO-specific project plans as required. Typically, a project plan shall be submitted within seven days of receipt of a TO, but some TOs may require a quicker or longer response time. Submission of a project plan to EPA shall be within the specified timeframe in the TO statement of work (SOW). The contractor's project plan may be in the form of a memo to EPA that indicates the technical SOW will be followed as written and the estimated ceiling-price is acceptable. It is the responsibility of the contractor to clearly and specifically outline the modification(s), if any, to the technical approach specified in the SOW in the submitted project plan. In addition, if the contractor will not accept the ceiling-price of the TO, then a revised cost estimate shall be provided to EPA and accompany the project plan. Any changes to the technical approach and/or ceiling-price will be negotiated between the contractor and EPA.

The contractor shall be required to use EPA Region VII-approved analytical instruments, methods and techniques, and documented quality control procedures. Routine turnaround time for data deliverables will be 21 calendar days. However, some TOs may require a quicker or longer turnaround time. These turnaround times will be specified on an individual TO basis. Data deliverables for quicker or shorter turnaround times shall be submitted as specified in the individual TO.

SPECIFIC REQUIREMENTS

The contractor shall use EPA Region VII-approved instruments and techniques to identify and measure the concentrations of the compounds listed on the Target Analyte List (Tables 1 & 2) and other compounds required to be analyzed for the Agency. The contractor shall use EPA Region VII-approved methods for the determination of the presence and concentration of target compounds. Because of certain regulatory requirements, EPA may require specific methods to be employed for the analysis of selected samples.

Primary Task Descriptions

This section provides a description of the primary task areas of the contract. The Agency may order work within any of these task areas for performance at any time during the contract period of performance.

Task 1: Analytical Services (Individual TO)

TABLES 1 & 2 indicate typical parameters which may be requested during the performance of the contract. These tables are not exhaustive and do not limit the potential parameters which may be requested during the performance of the contract. Work shall include the preparation and analysis of samples to determine the presence and concentration of target analytes and/or compounds specified in the SOW.

Sub-Task 1: Sample Management

The contractor shall receive and handle environmental samples and data using EPA Region VII-approved chain-of-custody, as shown in Attachment I, evidentiary, document control, and confidentiality procedures. Activities shall be coordinated with designated Agency personnel, as specified in individual TOs.

Sub-Task 2: Multi-Media Sample Preparation and Analysis

The contractor shall prepare and analyze environmental samples using EPA Region VII-approved methodology and instrumentation. TABLE 3 provides an abbreviated list of sources for analytical methods which may be required in the performance of a given TO. This is not an exhaustive list and does not limit the sources of analytical methods EPA may require the contractor to utilize in the performance of a given TO.

The contractor shall follow EPA Region VII-approved QA/QC procedures and maintain documentation in electronic and hardcopy format to substantiate the results obtained. Electronic data refers to the analytical results, and associated QC narrative, sent to EPA as the required deliverable by a given TO. In addition, electronic data includes GC/MS tapes and any other instrument-generated electronic storage media. Electronic data for a given TO shall be maintained for one year from the date EPA accepts the deliverables for the TO. Hardcopy data refers to all documentation associated with the contractor's performance under a given TO. Hardcopy documentation includes, but may not be limited to, sample receipt logbooks, preparation and analysis logbooks, raw instrument data, QC logs and summary forms, and the copies of the data provided to EPA in an electronic format.

All sample preparation and analysis shall be conducted within the allotted Sample Holding Times (SHT), unless otherwise specified in the TO. For the purpose of this contract, the SHT will be defined as the amount of time between the validated time of sample collection as indicated on the signed chain-of-custody record, or attachment, and the date of sample preparation. For some analytes there will be an additional SHT from the time of sample preparation to actual analysis.

Sub-Task 3: QA/QC Compliance

The contractor is responsible for conducting, reviewing, and determining acceptability of all QC elements used to support the analytical results generated prior to reporting the data to EPA. In addition, the contractor is responsible for performing adequate levels of QC such that the resulting data are technically- and scientifically- defensible. This may include the analysis of QC samples not specifically required in the TO, such as an independent check sample and other good laboratory practices necessary to ensure the usability and dependability of the data. All sample results shall be accompanied by associated QC data results which, at a minimum, include measurements of analytical detection limit, precision, accuracy, and a statement describing the usability of the data generated.

The contractor shall maintain all associated QC data, in hardcopy and electronic formats, for a given TO in the project data files and be subject to the same requirements for document maintenance, etc., applicable to sample data.

The contractor may be required to prepare written reports detailing results of data reviews for data generated under this contract, in accordance with applicable Agency data revirw SOPs, protocols, sampling/project plans, and/or specific technical direction as specified in a TO.

In the event of any unacceptable QA/QC performance, as specified by the analytical protocol, other applicable documents, and Agency guidance, the EPA shall have the option of rejecting all or part of the data package. No payment shall be made for such rejected data. The Agency shall have the option of requiring re-analyses in such cases, at no additional cost to the Agency. The Agency shall have 30 days from the receipt of a data package to review it and make a written request for re-analysis, if necessary. Data re-submissions, by the contractor, shall be made within seven (7) calendar days of receipt of such notice, or as negotiated on a given TO. All requirements for routine data submission also apply to resubmitted data.

As part of the Agency QA/QC oversight of this contract, the Agency reserves the right to conduct announced and/or unannounced, on-site, facility audits during normal business hours at a frequency to be determined by EPA. Efforts of the contractor related to such audit activities are not subject to compensation by EPA. The Agency may require the analysis of audit samples at its discretion; the results of such audits shall be provided to the TM along with recommendations for corrective actions, if necessary, by the PO-designated representative(s).

Sub-Task 4: Data Reporting

The contractor is responsible for submitting both analytical and QC data results in a standardized electronic format using Agency provided software, within an agreed-upon number of calendar days for analytical data. In cases where data are submitted late and results in additional costs incurred by the Agency will cause the Agency to seek compensation to recover the costs incurred. Data which fail to meet specifications and are, therefore, unusable, will result in compensation being denied to the contractor. Data shall be electronically submitted within an agreed-upon number of calendar days or may be

determined to be unusable and result in compensation being denied to the contractor. If the delay results in additional costs being incurred by the Agency, then compensation for those costs will be sought.

The contractor shall provide a summary (Windows WordPerfect 9 file or compatible) of each applicable QC area required in the TO which indicates if control limits were met and,if not, what corrective action was taken by the contractor to remedy the situation. In addition, the contractor shall include, with each TO, a statement certifying that the deliverables met the terms and conditions of the TO for both technical aspects and completeness.

The contractor is also required to submit hardcopies of supporting analytical records within seven (7) calendar days of the date of request by EPA. All data generated, under specific TOs, are the property of the Agency and shall not be modified, copied, released, distributed, or destroyed by the contractor without the written approval of the PO and CO. The contractor shall submit all raw data and supporting hardcopy documentation, for a given TO, one year after the date of acceptance by EPA. Hardcopy documentation shall include, but not be limited to, the original documents of raw data, analysts logbooks, sample preparation logbooks, instrument logs, chain-of-custody records, tracking forms, data summaries, quality control (QC) data, and any other documents generated in the performance of a given TO (NOTE: For bound logbooks, and other documents that contain information not generated under this contract, copies of applicable pages will be acceptable).

Task 2: Method Development/Research

The contractor may be tasked to develop and validate an analytical method/process for the preparation and/or analysis of various materials, including, but not limited to environmental samples. Requests may include samples in atypical matrices or uncommon parameters for which there are no widely accepted or published methods. Procedures for performance of novel analyses shall be approved by the EPA PO before being adopted for use by the contractor.

Acceptable performance of this task is based on the success or failure of the contractor's ability to develop (or modify) a method or analytical approach, within a mutually agreeable timeframe, for a specific parameter that is of interest to the Agency. Success under this task means that the contractor develops (or modifies) a method that can be utilized to analyze a parameter of interest in a single, or in a variety of, matrices and achieves a method detection and/or reporting limit at, or below, the concentration level(s) of interest. In addition, the analytical approach is well documented, follows acceptable procedures specified in EPA (and other sources) guidance and regulatory documents, and includes adequate and appropriate quality control (QC) data. An unsuccessful outcome under this task is defined to mean that the contractor did not develop (or modify) a method for the parameter, matrix, and/or concentration of interest, and/or the approach does not follow widely accepted laboratory practices/techniques and does not include the appropriate QC data/documentation, resulting in the Agency being unable to carry out its mission.

Task 3: Data Defensibility Requirements

The contractor shall generate data of known and defensible quality and shall implement all activities to successfully achieve these goals. In the event data generated under this contract is questioned, the contractor bears the burden of proof and defense of the data. Therefore, the contractor shall generate and maintain internal routine and specialized documentation which assesses and asserts the validity of all data generated.

Contractor responsibility as described in the preceding paragraph may include, but is not limited to, the presentation of testimony or affidavits concerning samples analyzed under this contract. In the event the contractor is required to participate in legal proceedings, compensation for the necessary personnel, number of hours required, and applicable travel expenses will be negotiated between EPA and the contractor under a separate contract vehicle.

Acceptable performance for this task includes EPA evaluation of the contractor's success in defending the technical validity of the data involved in a legal proceeding. An "adequate defense of the data" means that no adverse ruling was issued against the Agency based on a lack of technical validity of the data generated by the contractor. An "inadequate defense of data" means that a decision against the Agency is received in a formal enforcement action, where such decision is a result of the failure of the contractor to demonstrate the technical validity of data generated under the contract in a legal proceeding.

TABLE 1 - ORGANIC CONSTITUENTS

VOLATILES (VOA)

Acetone
Benzene
Bromodichloromethane
Bromoform

Bromomethane
2-Butanone
Carbon Disulfide
Carbon Tetrachloride

Chlorobenzene
Chloroethane
Chloroform
Chloromethane

Dibromochloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene

1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
cis-1,2-Dichloroethene

trans-1,2-Dichloroethene
1,2-Dichloropropane
cis-1,3-Dichloropropene
trans-1,3-Dichloropropene

Ethyl Benzene
2-Hexanone
Methylene Chloride
4-Methyl-2-Pentanone

Styrene
1,1,2,2-Tetrachloroethane
Tetrachloroethene
Toluene

1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Vinyl Chloride

m and/or p-Xylene
o-Xylene

TABLE 1 - ORGANIC CONSTITUENTS CONTINUED

SEMI-VOLATILES (BNA)

Acenaphthene
Acenaphthylene
Anthracene

Benzo(a)Anthracene
Dibenzo(a,h)Anthracene
Carbazole

4-Chloroaniline
2-Chloronaphthalene
2-Chlorophenol

Chrysene
Ortho Cresol
Para Cresol

Dibenzofuran
1,2-Dichlorobenzene
1,3-Dichlorobenzene

1,4-Dichlorobenzene
3,3'-Dichlorobenzidine
2,4-Dichlorophenol

Diethylphthalate
2,4-Dimethylphenol
Dimethylphthalate

2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene

4-Chlorophenyl Phenylether
4-Bromophenyl Phenylether
Bis(2-Chloroethyl)Ether

Bis(2-Chloroisopropyl)Ether
Fluoranthene
Benzo(b)Fluoranthene

Benzo(k)Fluoranthene
Fluorene
Hexachlorobenzene

TABLE 1 - ORGANIC CONSTITUENTS CONTINUED

BNAs CONTINUED

Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane

Isophorone
Bis(2-Chloroethyoxy)Methane
2-Methylnaphthalene

N-Nitrosodipropylamine
N-Nitrosodiphenylamine
Naphthalene

2-Nitroaniline
3-Nitroaniline
4-Nitroaniline

Nitrobenzene
2-Nitrophenol
4-Nitrophenol

Pentachlorophenol
Benzo(g,h,i)Perylene
Phenanthrene

Phenol
4-Chloro-3-Methylphenol
4,6-Dinitro-2-Methylphenol

Bis(2-Ethylhexyl)Phthalate
Butyl Benzyl Phthalate
Di-N-Butyl-Phthalate

Di-N-Octyl-Phthalate
Pyrene
Benzo(a)Pyrene

Indeno(1,2,3-cd)Pyrene
1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol

2,4,6-Trichlorophenol

TABLE 1 - ORGANIC CONSTITUENTS CONTINUED

PESTICIDES/PCBs

alpha-BHC
beta-BHC
delta-BHC
gamma-BHC (Lindane)
Heptachlor

Aldrin
Heptachlor epoxide
Endosulfan I
Dieldrin
4,4′-DDD

4,4'-DDE
4,4'-DDT
Endrin
Endosulfan II
Endosulfan sulfate

Methoxychlor
Endrin ketone
Endrin aldehyde
alpha-Chlordane
gamma-Chlordane

Toxaphene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242

Aroclor-1248
Aroclor-1254
Aroclor-1260

HERBICIDES

2,4-D
2,4,5-T
2,4,5-TP (Silvex)

TABLE 1 - ORGANIC CONSTITUENTS CONTINUED

EXPLOSIVES

RDX
HMX
Tetryl

1,3,5-Trinitrobenzene
1,3-Dinitrobenzene
2,4,6-Trinitrotoluene

2,4-Dinitrotoluene
4-Nitrotoluene (4-NT)
3-Nitrotoluene (3-NT)

2-Nitrotoluene (2-NT)
Nitrobenzene
2,6-Dinitrotoluene

DIOXINS/FURANS

2,3,7,8-TCDD
2,3,7,8-TCDF
1,2,3,7,8-PeCDD

1,2,3,7,8-PeCDF
1,3,4,7,8-PeCDF
1,2,3,4,7,8-HxCDD

1,2,3,6,7,8-HxCDD
1,2,3,7,8,9-HxCDD
1,2,3,4,7,8-HxCDF

1,2,3,6,7,8-HxCDF
1,2,3,7,8,9-HxCDF
1,3,4,6,7,8-HxCDF

1,2,3,4,6,7,8-HpCDD
1,2,3,4,6,7,8-HpCDF
1,2,3,4,7,8,9-HpCDF

OCDD
OCDF
TCDD Equivalents

TABLE 1 - ORGANIC CONSTITUENTS CONTINUED

TCLP-VOLATILE ORGANICS (VOA)

Benzene, TCLP
Carbon Tetrachloride, TCLP
Chlorobenzene, TCLP
Chloroform, TCLP
1,2-Dichloroethane, TCLP
1,1-Dichloroethylene, TCLP
Methyl Ethyl Ketone, TCLP
Tetrachloroethylene, TCLP
Trichloroethylene, TCLP
Vinyl Chloride, TCLP

TCLP SEMI-VOLATILES (BNA)

Meta Cresol, TCLP
Ortho Cresol, TCLP
Para Cresol, TCLP
1,4-Dichlorobenzene, TCLP
2,4-Dinitrotoluene, TCLP
Hexachlorobenzene, TCLP
Hexachlorobutadiene, TCLP
Hexachloroethane, TCLP
Nitrobenzene, TCLP
Pentachlorophenol, TCLP
Pyridine, TCLP
2,4,5-Trichlorophenol, TCLP
2,4,6-Trichlorophenol, TCLP

TCLP PESTICIDES/HERBICIDES

Chlordane, TCLP
Endrin, TCLP
Heptachlor, TCLP
Lindane, TCLP
Methoxychlor, TCLP
Toxaphene, TCLP
2,4-D, TCLP
2,4,5-TP (Silvex), TCLP

TABLE 2 - INORGANIC CONSTITUENTS

METALS (TOTAL OR DISSOLVED)

Aluminum
Antimony
Arsenic

Barium
Beryllium
Cadmium

Calcium
Chromium
Cobalt

Copper
Iron
Lead

Magnesium
Manganese
Mercury

Nickel
Potassium
Selenium

Silver
Sodium
Thallium

Vanadium
Zinc

TCLP METALS

Arsenic, TCLP
Barium, TCLP
Cadmium, TCLP
Chromium, TCLP
Lead, TCLP
Mercury, TCLP
Selenium, TCLP
Silver, TCLP

TABLE 2 - INORGANIC CONSTITUENTS CONTINUED

OTHER PARAMETERS

Cyanide (total)
Perchlorate

Ammonia Nitrogen
Total Kjeldahl Nitrogen (TKN)
Nitrate/Nitrite Nitrogen

Chloride
Fluoride

Phenols
Total Phosphorous
Sulfate

pH
Hardness (total & calcium)
Alkalinity (carbonate & bicarbonate)

Total Dissolved Solids (TDS)
Total Suspended Solids (TSS)

Biochemical Oxygen Demand (BOD)
Carbonaceous Biochemical Oxygen Demand (CBOD)
Chemical Oxygen Demand (COD)
Dissolved Oxygen (DO)

Total Organic Halides (TOX)
Total Organic Carbon (TOC)

Asbestos (PLM, PCM, or TEM)
Oil & Grease

Coliform (Fecal or Total)
Standard Plate Count

Microbiology
Virology

Radiochemistry (U, Ra, α, β, γ)

TABLE 3 - METHODS REFERENCE INDEX

EPA Region VII Standard Operating Procedures (SOP)

EPA Contract Laboratory Program (CLP) Statements of Work

EPA Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW-846)

EPA Methods for Drinking Water Certification

NIOSH Methods

ASTM Methods